AMENDMENTS TO THE CLAIMS

1. (Original) A wireless interface device that services communications between a wirelessly enabled host and at least one user input device, the wireless interface device comprising:

a user input device comprising a switch matrix having a plurality of rows and columns;

a wireless interface unit that wirelessly interfaces with the wirelessly enabled host;

a processing unit operably coupled to the wireless interface unit;

an input/output unit operably coupled to the wireless interface unit and to the processing unit, wherein the input/output unit also operably couples to the user input device; and

a keyboard scanning circuit operably coupled to said input/output device to scan the rows and columns of said user input device, wherein said scanning circuit detects operation of a key associated with said user device by detecting a transition in the voltage level of at least one row in said switch matrix from a first state to a second state and thereafter forces said row back to said first state thereby decreasing the scanning interval for detecting row transitions.

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) The user input device of claim ~~3~~ 1, wherein upon detection of a transition in the voltage level of said row, the ~~scan logic~~ scanning circuit identifies a plurality of columns associated with ~~the~~ a plurality of switches and sequentially scans each of the plurality of columns to resolve the ambiguity and thereby identify activation of an unambiguous plurality of switches.

5. (Currently Amended) The user input device of claim 1, ~~wherein the~~ further comprising a switch transition ~~circuitry generates~~ circuit operable to generate an I/O activation signal upon detection of a switch transition.

6. (Original) The user input device of claim 5, wherein the I/O activation signal causes the user input device to transition from a low power state to a busy state.

7. (Original) A method of detecting an input to a key switch matrix on a user input device, comprising:

applying control signals to the rows and columns of the switch matrix to place the rows and columns in a predetermined state;

detecting a transition in the voltage level of at least one row in the switch matrix from a first state to a second state; and

forcing said row back to said first state thereby decreasing the scanning interval for detecting row transitions.

8. (Cancelled)

9. (Cancelled)

10. (Currently Amended) The ~~user input device~~ method of claim 9, ~~wherein the scan logic identifies~~ further comprising: using a scanning circuit to detect a transition in the voltage level of said row and further using said scanning circuit to identify a plurality of columns associated with ~~the~~ a plurality of switches and to sequentially ~~scans~~ scan each of the plurality of columns to resolve the ambiguity and thereby identify activation of an unambiguous plurality of switches.

11. (Currently Amended) The ~~user input device~~ method of claim 7, ~~wherein the~~ further comprising: using switch transition circuitry ~~generates~~ to generate an I/O activation signal upon detection of a ~~switch~~ transition in the voltage level of one of said rows.

12. (Currently Amended) The ~~user input device~~ method of claim 11, wherein said ~~output~~ I/O activation signal ~~of the switch transition circuitry~~ causes the user input device to transition from a low power state to a busy state.

13. (Original) A system that services communications between a wirelessly enabled host and at least one user input device, comprising:

a wireless interface unit that wirelessly interfaces with the wirelessly enabled host;

a processing unit operably coupled to the wireless interface unit;

an input/output unit operably coupled to the wireless interface unit and to the processing unit, wherein the input/output unit also operably couples to the user input device;

a power management unit operably coupled to the wireless interface unit, the processing unit, and the input/output unit, wherein the power management unit controls the power consumption of the system; and

a user input device, comprising:

a switch matrix having a plurality of rows and columns;

a wireless interface unit that wirelessly interfaces with the wirelessly enabled host;

a processing unit operably coupled to the wireless interface unit;

an input/output unit operably coupled to the wireless interface unit and to the processing unit, wherein the input/output unit also operably couples to the user input device; and

a keyboard scanning circuit operably coupled to said input/output device to scan the rows and columns of said user input device, wherein said scanning circuit detects operation of a key associated with said user device by detecting a transition in the voltage level of at least one row in said switch matrix from a first state to a second state and thereafter forces said row back to said first state thereby decreasing the scanning interval for detecting row transitions.

14. (Cancelled)

15. (Cancelled)

16. (Currently Amended) The system of claim ~~15~~ 13, wherein upon detection of a transition in the voltage level of said row, the ~~scan logic~~ scanning circuit identifies a plurality of columns associated with ~~the~~ a plurality of switches and sequentially scans each of the plurality of columns to resolve the ambiguity and thereby identify activation of an unambiguous plurality of switches.

17. (Original) The system of claim 13, wherein the power management unit powers down the wireless interface unit and the processing unit after at least one inactivity period during which the user input device is inactive with respect to the input/output unit.

18. (Original) The system of claim 13, wherein the power management unit controls the power consumption of the system by:

powering down the wireless interface unit and the processing unit during reduced power operations; and

based upon notification received from the input/output unit indicating activity by the user input device, powering up the wireless interface unit and the processing unit.

19. (Original) The system of claim 18, wherein the system enters one of a plurality of power consumption operating states comprising:

busy mode in which all components of the wireless interface device are powered and operational;

idle mode in which the wireless interface unit performs first power conserving operations;

suspend mode in which the wireless interface unit performs second power conserving operations; and

power down mode in which the wireless interface unit and the processing unit are powered down.

20. (Currently Amended) The system of claim 13, ~~wherein the~~ further comprising switch transition circuitry ~~generates~~ operable to generate an I/O activation signal upon detection of a switch transition.

21. (Original) The system of claim 17, wherein the I/O activation signal causes the system to transition from a low power state to a busy state.